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AI in News Radio: Navigating Technology while Preserving Human Connection and Journalistic Values (A Case Study of Three News Radio Stations in Jakarta, Indonesia)

*AI dalam Radio Berita: Menavigasi Teknologi untuk Mempertahankan Koneksi Manusia dengan Nilai-Nilai Jurnalistik
(Studi Kasus Tiga Stasiun Radio Berita di Jakarta, Indonesia)*

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ABSTRACT

Since the public's adoption of ChatGPT in 2022, concerns have arisen about the possibility of AI will replace human roles across various industries, including radio broadcasting. While many radio professionals argue that AI will not diminish the importance of human involvement, some stations are already incorporating AI technologies. This study examines AI adoption in three news radio stations in Jakarta, focusing on its usage, guidelines, and future implementation plans. Utilizing a qualitative case study method, data were gathered through interviews with editors, observations, and literature review. The results show that initially, AI was not considered essential in news radio due to its simple production; however, its development is closely monitored. While AI improves efficiency, concerns about over-reliance on technology impacting human relationships persist. Radio managers must balance technological progress with human connections and uphold journalistic standards to maintain listener trust. Stations differ in their AI use—some utilize it for specific tasks, while others integrate it into operations and customize their content. There are no formal internal guidelines for AI in journalism, highlighting the importance of the guidelines from the Indonesian press council. AI serves in editorial processes, but the human role remains central in news judgment. The broadcaster-listener relationship remains vital; however, it is important to consider the shifting patterns of media consumption.

INFO ARTIKEL

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ABSTRAK

Sejak diperkenalkan secara luas pada tahun 2022, teknologi kecerdasan buatan (AI), ChatGPT memunculkan kontroversi terkait kemungkinan AI menggantikan peran manusia dalam berbagai bidang pekerjaan, termasuk industri penyiaran radio. Sementara, sebagian ahli radio meyakini bahwa AI tidak akan menggantikan manusia

serta mulai mengadopsinya dalam berbagai aspek pengelolaan siaran. Penelitian ini menganalisis adopsi AI di tiga stasiun radio berita di Jakarta dengan fokus pada pandangan manajemen, kebijakan penerapan, dan jenis teknologi AI yang digunakan. Penelitian ini menggunakan metode studi kasus kualitatif. Data dikumpulkan melalui wawancara dengan pengelola radio, observasi, dan tinjauan pustaka. Hasil penelitian pada awalnya menunjukkan AI belum dianggap sebagai kebutuhan utama dalam industri radio, karena sifat pengelolaan media ini relatif sederhana. Namun, perkembangannya tetap dipantau secara ketat. AI terbukti meningkatkan efisiensi operasional, tetapi ketergantungan terhadap teknologi ini masih menimbulkan kekhawatiran mengenai dampaknya terhadap aspek manusiawi dalam penyiaran. Sebagai radio yang berfokus pada berita, ketiga stasiun radio yang diteliti menekankan pentingnya penegakan standar jurnalistik guna menjaga kepercayaan pendengar. Pendekatan terhadap AI bervariasi, beberapa stasiun hanya memanfaatkan untuk tugas-tugas tertentu, sementara yang lain mengintegrasikan lebih luas. Saat ini belum ada pedoman internal formal terkait penggunaan AI di setiap subjek penelitian sehingga menegaskan urgensi pedoman dari Dewan Pers Indonesia. Meskipun AI mulai berperan dalam proses editorial, penilaian berita tetap berada di tangan manusia. Selain itu, interaksi penyiar dengan pendengar masih menjadi elemen krusial yang terus mengikuti perubahan pola konsumsi media.

Introduction

The discussion about whether artificial intelligence (AI) will replace human roles in various industries or not has intensified since the rise of ChatGPT in 2022. The presence of ChatGPT and other AI technologies raises uncertainty about whether they will become a new source of disruption in media management, similar to other intangible goods industries (Chan-Olmsted, 2019). This concern extends to the radio broadcasting industry, where many professionals worry that AI could take over crucial tasks in production and distribution. A significant area of anxiety is the role of radio hosts, as AI technology becomes increasingly capable of mimicking human voices. The fear is that advancements in AI could lead to a diminished need for human broadcasters, impacting jobs and the overall landscape of radio programming (Baber et al., 2024).

This ongoing debate raises important questions about the future of work in the industry and how technology may reshape traditional roles. As AI continues to evolve and improve, it challenges the conventional methods of broadcasting, prompting industry experts to consider the balance between technological innovation and the irreplaceable human touch in media (Hu et al., 2021; Knight, 2024). AI is capable of performing numerous complex tasks that previously required the efforts of many individuals. These tasks include content selection, scheduling, scriptwriting, content distribution, marketing, and more (Hu et al., 2021; Ćitić, 2020; Furtáková & Janáčková, 2023).

The use and advancement of AI technology is not limited and has a significant impact on the media business as a whole. Kompas, a leading national mass media in Indonesia, discussed how AI can become a source of disruption for the mass media industry in its editorial section (Kompas, 2024). However, AI can be utilized in various fields of media management. Artificial intelligence technology has brought significant changes in the way we manage and produce content. From data analysis to process automation, AI offers efficient and innovative solutions. Wei, Scifo, and Xu identified at least nine areas where AI can be utilized in the mass media industry (2022). Every aspect of media management can benefit from AI technology, ranging from business and content planning to content production, marketing, and distribution.

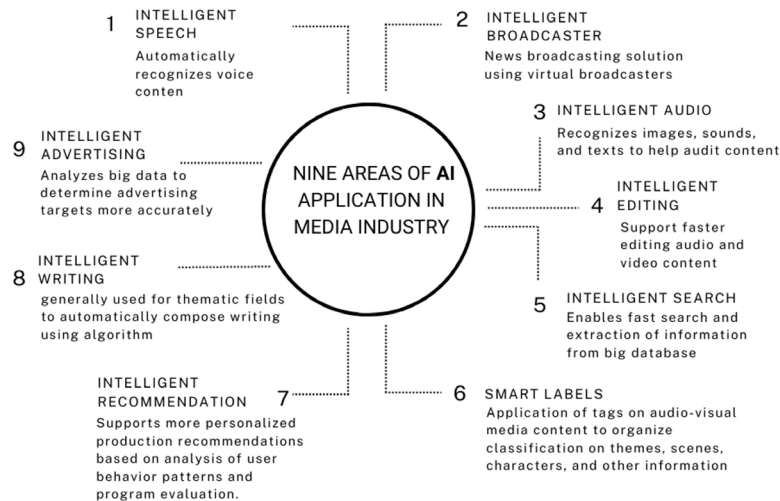


Figure 1. Nine areas of AI application in media industry

Source: Compiled from Wei, Scifo, and Xu, 2022

In Indonesia, a similar practice is taking place. In November 2023, Radio Mustang 88 FM introduced AIMEE, the first AI radio announcer in the country. AIMEE stands for artificial intelligence Mustang announcer for everyone (Krause, 2020). This initiative aims to refresh the station and attract Generation Z listeners with AIMEE's youthful and energetic female voice (Prasad & Makesh, 2024). This move is based on a Nielsen study from 2019, which revealed a 57% increase in radio listeners (Annisyah et al., 2022), particularly among Gen Z and Millennials, a trend expected to continue (Pratama, 2022).

Additionally, various studies show that AI technology can help radio companies enhance broadcast efficiency and quality. Hu and Ćitić highlighted the potential of AI voice technology in the radio industry (Ćitić, 2020; Hu et al., 2021). This technology can help create announcer voices, write ad scripts, and automate various other tasks. Rouxel added that AI could change the way content is produced and distributed by analyzing audience characteristics, allowing radio stations to reach more listeners (2020). Furtáková and Janáčková also discuss the use of AI at radio stations in Slovakia, where the technology is used to select songs and write and broadcast news. All authors agree that AI has great potential to increase efficiency and reach in the radio industry (2023). iHeartMedia is a radio network that effectively uses artificial intelligence (AI) for several important tasks. They employ algorithms to determine which music to play and to schedule radio broadcasts (Stine, 2023). Additionally, iHeartMedia utilizes AI for other intensive jobs, such as translating radio shows and podcasts into foreign languages and editing audio content. This use of AI helps streamline their operations and improve the overall listening experience for audiences.

While this situation is concerning, many radio broadcasting practitioners believe that the development of AI cannot replace the essential role of human presence. Radio possesses unique qualities that differentiate it from other broadcasting media, particularly the active interaction and closeness between the broadcaster and the audience (Asy'ari & Marantika, 2020; Krause, 2020; Sehpudin & Fachrodji, 2020; Thompson, 2020). Many feel that AI will struggle to replicate this connection (Knight, 2024; Pratama, 2022). The integration of AI into radio can enhance efficiency, but it is crucial to recognize the irreplaceable value of human engagement.

This indicates that AI is an emerging trend in the broadcasting radio industry that can no longer be overlooked. Unfortunately, many radio stations in Indonesia have been slow to adopt this technology, causing them to fall behind and struggle to compete, jeopardizing their business viability (Octavia, 2018; Rachmiatie et al., 2020). The application of artificial intelligence (AI) in broadcast radio journalism represents a novel phenomenon in Indonesia. While AI has been integrated into various sectors, including

healthcare and education, its use in news radio presents unique challenges, particularly concerning ethical considerations and journalistic principles. Journalistic outputs, such as news segments and other audio journalism forms, must be informative, clear, credible, and factual, avoiding the fabrication of non-existent information. Consequently, the implementation of AI in this context necessitates meticulous attention to ensure the accuracy and integrity of the information disseminated to the public.

The sample of this study consists of three radio networks based in Jakarta. Data from the Indonesian press council as of January 2025 shows that only 13 radio stations across Indonesia are verified administratively and factually. The radio networks included in the research sample fall under this category. The researcher focused on radio network companies due to their extensive reach, such as Radio Sonora under Kompas Gramedia Radio Network (KG Radio Network), which operates 15 stations across various cities in Indonesia; MNC Trijaya FM, with 6 network members; and Radio Elshinta, which is connected with 7 Radio Elshinta stations in different regions. The policies of the parent station determine the policies at the member stations. The objective of this research is to examine the perspectives and responses of the managers of the three research subjects regarding the presence and utilization of AI technology in the production and management aspects of each radio station, with a particular focus on its journalistic content. Furthermore, the research also sought to investigate the policies and processes for adopting AI technology, the types of AI technology applications currently in use or under development, and the rationale behind their selection.

Method

This research investigates the application of AI technology in news radio through a qualitative approach, employing a case study methodology grounded in fundamental assumptions and issues to meet its objectives. The qualitative approach enables researchers to examine phenomena in their natural contexts, aiming to understand or interpret the meanings individuals attribute to their experiences (Denzin & Lincoln, 2000). Additionally, qualitative case studies focus on comprehending the intricacies of a particular case within significant circumstances (Stake, 1995).

This study employs purposive sampling, based on criteria that facilitate the investigation of the phenomenon. LeCompte and Schensul describe this as criterion-based selection, which directly aligns with the research objectives (2010). The sample for this study consists of news-format radio stations in Indonesia. According to the Indonesian Press Council's website, 13 radio stations across Indonesia are verified both administratively and factually (<https://dewanpers.or.id/data/perusahaanpers>, accessed February 2, 2025). Three of these stations are located in Jakarta. The researcher selected networked radio stations, such as KG Radio Network, MNC Trijaya FM, and Radio Elshinta, as these stations oversee multiple affiliates in various cities across Indonesia. The policies of the parent companies influence the operations of several stations within their networks. MNC Trijaya operates six stations across different regions, KG Radio Network manages dozens of stations, including Radio Sonora, which airs news programs, and Radio Elshinta runs a network spanning seven cities in Indonesia.

The study focuses on the policy level of decision-makers at each radio station, particularly the network company's leadership, as they hold the highest decision-making authority. Given that the research is in its preliminary stage regarding policy, the selection of informants is based on the need for policy decision-makers. For each radio station, key informants were chosen, including the vice director and editor-in-chief. The vice director plays a pivotal role in supporting strategic decision-making and policy implementation, while the editor-in-chief, as the highest-ranking editorial position, oversees all aspects of news production, from content to human resources and budgeting (**Table I**). This research explores the perspectives of these informants on AI utilization, the related policies, and the dynamics of its implementation within news radio management. Data collection was conducted through interviews, observations, and literature reviews. Interviews with the managers of these three news radio stations, conducted both face-to-face and via Zoom, formed the primary data collection method. This approach is

particularly effective for exploring individual experiences and interpretations (Lincoln et al., 2011). The data collection process occurred between September 2023 and August 2024.

Tabel I The Informants of Research

No.	Name	Position	Location of The Radio Station	Ownership/Format
1	Informant 1	Chief Editor of Radio Trijaya	Jakarta	Private/Music & Information
2	Informant 2	Chief Editor of Radio Elshinta	Jakarta	Private/News & Talks
3	Informant 3	Vice Director of Kompas Gramedia Radio Network	Jakarta	Private/Music & Information

Source: Compiled by researchers

The qualitative data collected consists of transcribed interview texts from research informants, observation reports, and relevant documents. The data was then processed and analyzed through three stages of qualitative data analysis: data reduction, data presentation, and drawing conclusions along with verification (Miles et al., 2014). To achieve the heuristic objectives of qualitative research, the data analysis process adheres to an inductive principle, starting with raw data and subsequently reconceptualizing it through the application of codes and themes (Creswell, 2018). This heuristic process is not bound by any specific technique or formula, allowing researchers to conduct it according to their preferences and the circumstances of the study (Saldana, 2013).

Results and Discussion

Three news radio stations under investigation have incorporated AI technology into various activities. The perspectives of the management teams are similar; they view AI as an inevitable element in the management of broadcast radio. Each station's policies and adoption of AI technology adhere to journalistic principles, which form the foundation of information and news radio management. The use of AI technology varies among the radio organizations studied. Below is a detailed examination of three key aspects as follows:

Responds to the Proliferation and Use of Artificial Intelligence (AI) Technology

Initially, the presence of AI was not a major consideration for radio broadcasting, which is known for its simplicity and accessibility. However, as AI technology advanced, radio managers began to explore its potential. Informant 1, the editor-in-chief of Radio Trijaya FM Jakarta, noted that they are considering how to utilize AI effectively in radio. The main concern is how AI aligns with the unique characteristics of radio, which is personal, quick, responsive, and interactive. The informant emphasized that AI cannot replace these aspects, which are vital for creating intimacy and interaction, unlike TV and social media.

Radio has a distinct advantage over other media, such as TV and social media, in delivering information. While people can get their news through various platforms, radio offers an immediacy and interaction that is hard to match. The more intimate and responsive nature of radio allows listeners to feel more connected to the broadcasters and the content presented. As such, radio remains an attractive option for those who want a more personalized listening experience.

“What our listeners need on the radio is interaction. We talk, he responds, and then we convey his response. Then we entertain them with jokes or political satires that make them laugh and respond back. So, the measure that our program is enjoyed or liked is when they respond back to what we say, even though we don't ask them to respond” (a direct interview with Informant 1 on 3 January 2024).

Informant 2 highlights the unique role of radio broadcasting, particularly at Radio Elshintia, in adapting to AI technology. The station treats its listeners like family, fostering a strong connection and making them feel at home while listening. The management aims to strengthen this bond further. However, Informant 2 acknowledges the inevitable rise of AI in the future, suggesting that it cannot be resisted and that the industry will move in that direction. Informant 2 said, "It feels like we can't resist (AI technology). In the future, the times will lead in that direction..." The most crucial aspect of the news and talk radio format led by Informant 2 is a return to the core principles that define this medium. News radio must adhere to fundamental journalistic standards, including accuracy, balance, honesty, and transparency. These principles serve not only as a foundation for effective broadcasting but also as a guide for navigating the complexities introduced by AI technology in the radio landscape.

Radio Elshintia understands the importance of maintaining the audience's trust, as it is central to its news format and overall business. There are concerns that the use of artificial intelligence (AI) may diminish this trust. Additionally, reliance on AI could lead to a loss of intimacy, which is considered one of the radio's strengths in broadcasting. The station recognizes that fostering a personal connection with listeners is crucial for its success and aims to balance technological advancements with the need for human touch in its programming. Maintaining audience trust is essential for sustaining its operations and reputation.

"The news business that we oversee, the format that we have, is a trust business. When we use the voice of a person who is already known by the audience and tell them that it's the voice of AI, maybe they won't feel so close to the station. Because one of the strengths of radio is that intimacy with the audience" (a direct interview with Informant 2 on 18 January 2024).

Informant 3, the vice director of the Kompas Gramedia Radio Network, sees AI technology as essential for managing broadcast radio and communication. She emphasizes the need for radio management to adapt to technological advancements. While adapting to technology is important, it should be communicated subtly rather than being the main focus. Currently, AI is viewed as a valuable tool that supports the management of various radio broadcasts within the KG Radio Network, enhancing their operations and efficiency.

"Sometimes we humans get stuck on ideas. We use ChatGPT to find the name of the program; we use that. So whatever technology it is, we always try to use it, try to get to know it, just to become a supporting tool. Not the main goal when it comes to the radio business, yes, the radio industry" (a direct interview with Informant 3 on 19 September 2023).

The emergence and advancement of AI technology is increasingly significant and seems inevitable. The radio broadcasting industry is notably impacted, with research participants agreeing that AI in radio is unavoidable. Currently, AI is not considered a central focus, but monitoring continues as adoption strategies are adjusted, considering feasibility and the unique characteristics of radio broadcasting. The three radio stations that are subjects of this study are recognized for their audio journalism products, making this a crucial consideration. Journalistic standards, such as accuracy, balance, honesty, and transparency, must guide the use of AI technology in this context.

Initially, some sources argued that addressing the presence of AI technology was not yet urgent. According to them, radio's characteristics prioritize simplicity, ease of production, and accessibility, so AI technology assistance was not yet necessary. Nevertheless, the sources continued to monitor and study the development of AI technology. As technology progressed, they began to explore how AI could enhance radio's unique features, particularly personal engagement and interactivity with listeners.

However, there is concern that over-reliance on AI could undermine these vital connections, which are essential for effective broadcasting. To thrive, radio must strike a balance between technological advancements and the human touch in its programming. Moreover, news radio must adhere to key

journalistic standards, such as accuracy and transparency, to maintain audience trust, which is crucial for success in news operations. There are concerns that the use of artificial intelligence (AI) could potentially undermine this trust.

Policy and Process for Adopting Artificial Intelligence (AI) Technology

The study examines different policies regarding technology use in broadcasting radios. Some subjects closely monitor advancements in AI technology while utilizing available free AI tools for specific activities. In contrast, other subjects have progressed further, actively integrating AI into their operations and even customizing content or programs.

Radio Elshinta has adopted AI technology through individual initiatives. However, the management has not yet established formal policies to regulate the use of AI in production processes and the content or programs produced. Despite this, the principles and guidelines of journalism should serve as a foundation for every crew member in this news and information format radio station, particularly regarding the use of AI technology.

“Although it may be informal, knowledge, insight into something or other (so far ed), is done privately. But in terms of the broadcasting system at Radio Elshinta, so far, we have not used it” (a direct interview with Informant 2 on 18 January 2024).

Radio Elshinta has been utilizing AI technology, albeit in a limited capacity. According to Informant 2, the editor-in-chief of Radio Elshinta, the current strategy prioritizes human expertise whenever possible. AI is employed only when human input is not feasible. This approach reflects a cautious integration of technology into their operations. The emphasis on human expertise suggests a commitment to maintaining quality and reliability in their broadcasts. By relying primarily on skilled professionals, Radio Elshinta aims to ensure that content remains accurate and engaging. Radio Elshinta, as a news and talk radio station, plays a vital role in maintaining journalistic integrity. Upholding journalistic principles is essential for delivering accurate and reliable information to the public. This commitment not only enhances the station's credibility but also fosters trust among its listeners. By adhering to these standards, Radio Elshinta ensures that it provides valuable content that informs and engages the audience while contributing positively to the media landscape.

Radio Elshinta has implemented AI technology primarily for non-journalistic content. Currently, this technology is utilized in advertisements and promotional spots. This approach aligns with existing policies concerning the use of AI in this media. The focus remains on enhancing content delivery in commercial areas while maintaining journalistic integrity. Informant 2 stated that they are currently monitoring the development of AI technology while implementing it on a limited basis. The AI technology has not yet been fully utilized as it is considered imperfect. If future developments allow for adjustments that align with the human-centered characteristics of broadcasting radio, policies regarding its use will also be adapted accordingly.

Radio Trijaya is cautiously integrating AI technology. According to Informant 1, the editor-in-chief, the station monitors AI advancements to stay up to date.

“...finally, we said, okay. We'll keep the AI for now, but we'll continue to study it. I told the social media team to analyze and practice what the development of AI is like. Don't allow it later when people are already using it in the media, there are radios using it, and we are even the latest. That's it” (a direct interview with informant 1 on 3 January 2024).

Any AI application will be based on analysis recommendations, ensuring alignment with the station's identity and audience preferences. The unique, humanistic character of the radio remains a core policy consideration. Additionally, AI is used primarily as a supportive tool, helping to provide

background information that informs editorial decisions and news coverage. This approach aims to enhance the quality of journalism while maintaining the station's traditional values.

KG Radio Network currently lacks a formal policy on AI technology use in its radios. Instead, AI is integrated into management routines in a supportive way. Informant 3 noted that the network is actively monitoring AI developments for potential increased usage. Presently, AI applications are experimental, as management aims to highlight adaptability to new technologies. However, AI is not the primary focus, as KG Radio Network is also exploring other advancements, especially in social media platforms, such as TikTok and Instagram. There are ongoing developments in audio-visual integration, particularly in Radio Motion, indicating a commitment to evolving alongside technology in the future.

"Yes, it will continue, and from the sound, actually, there has been development from audio only in Radio Motion, developed in Sonora with those visual effects. That's actually one step in development. So, in the future, we will continue to exercise, trying the best, most appropriate formula so that we remain adaptive to developing information technology" (a direct interview with Informant 3 on 19 September 2023).

KG Radio incorporates AI technology into its operations, which influences how they recruit new staff. Current employees are encouraged to enhance their skills in AI through easy-to-follow tutorials available on platforms like YouTube and TikTok. These resources aim to help staff learn to create and use AI tools effectively. The message is clear: mastering AI is accessible and can be achieved by anyone willing to learn. Training through these popular platforms is seen as a valuable way for employees to gain relevant skills that align with the evolving demands of the industry.

"...existing human resources must also enrich their skills with lots of really easy tutorials. So, they all learn through tutorials on YouTube, and all social media, including TikTok, which teach how to create or use this AI. So yes, it is not a skill that is difficult to learn, and yes, it is a common capability" (a direct interview with Informant 3 on 19 September).

This study is limited to three radio stations with news and journalistic content based in Jakarta. The findings from this research reveal differing responses from each radio station in terms of policy and subsequent steps towards adopting AI technology. Some subjects closely monitor advancements in AI technology while utilizing available free AI tools for specific activities. Meanwhile, radio stations within the Kompas Gramedia Radio Networks have progressed further, actively integrating AI into their operations and even customizing content or programs. Similarly, the existence of internal policies regarding the use of AI technology varies. To date, there is a notable lack of formal internal policies governing the use of AI technology, particularly within journalistic processes. This gap highlights the ongoing challenges and considerations that radio stations face in adapting to AI while maintaining journalistic integrity.

The Diverse Applications of AI Technology

The adoption of AI technology in radio varies by type and level of integration. The focus on using AI is linked to the specific journalistic standards of each radio format. At Radio Trijaya FM, new ideas and coverage are developed using a combination of search engines like Google, AI technology, and human input. Human involvement is crucial in selecting materials gathered through both search engines and AI. For instance, when planning a story, journalists use search engines to map existing media discussions, while humans assess the credibility of sources to determine which materials to reference in their reporting.

"...well, we try to use ChatGPT to take the middle ground. We assume that he (ChatGPT-ed) is taking from various sources that we think can click (in accordance) with us, compared to the mainstream media" (a direct interview with Informant 1 on 3 January 2024).

Artificial intelligence (AI) tools like ChatGPT are increasingly being used to enhance knowledge and understanding in various fields. Informant 1 noted that ChatGPT is particularly useful for enriching background information and providing additional material for writing, resulting in more concise and impactful content. Moreover, it assists journalists in strengthening their knowledge and references prior to fieldwork, as well as helping hosts prepare for interviews with news sources during live broadcasts. This shows the potential of AI technology to support professionals in their research and communication efforts, improving the quality of their work.

"...so that they know when they are going to interview (news) sources, they are not so blatant. Because some coverage and news (for example) related to oil and gas stocks is something that is not common. So, you have to understand, you have to learn the terms so that when you interview the sources, the conversation is not too unequal" (a direct interview with Informant 1 on 3 January 2024).

Radio Elshinta, a news and talk radio station, requires reliable materials to shape its news content. Informant 2 indicated that he increasingly depends on Google Trends to identify relevant news topics and discussions for the station's talk shows. Google Trends offers insights into search trends among Indonesians and globally via the Google search engine.

As an analytical tool, Google Trends enables users to monitor search patterns over time and across different regions. It allows individuals to track how frequently specific search terms are used, providing valuable insights into current interests and trends. By utilizing this tool, users can better understand what topics are gaining traction, aiding them in making informed business decisions.

The analysis results from Google Trends are used as considerations for news judgment at Radio Elshinta, which is conducted manually by producers, executive producers, reporters, and broadcasters. According to Informant 1, this process relies on human competence and adhering to journalistic standards. Additionally, the team feels they do not yet need AI assistance, like ChatGPT, as they can manage the tasks themselves. Informant 2 acknowledged that while there are limitations on using ChatGPT, individual crew members or journalists of Radio Elshinta can still access and utilize this tool. They can leverage ChatGPT to expand their knowledge and gain fresh insights. This indicates that technology can act as a supplementary resource for enhancing understanding and gathering information. However, it is important to approach its use with caution and deliberate consideration.

Kompas Gramedia Radio Network considers ChatGPT a valuable support tool in broadcast production and program management. According to Informant 3, they utilize ChatGPT to a limited degree for generating program ideas, naming programs, and identifying topics for news and talk shows. While there is potential for ChatGPT to assist with scriptwriting, the network emphasizes that human involvement remains essential for evaluating script feasibility, brainstorming, and overall idea generation in program management. This highlights the complementary role of AI in enhancing creative processes while still relying on human expertise.

"Sometimes, as humans, we get stuck on ideas. We use ChatGPT to find program names. It works. We always use whatever technology is available to us. We recognize it as a supporting tool. "It's not the main goal in terms of the radio business or the radio industry" (a direct interview with Informant 3 on 19 September 2023).

The use of a voice generator AI technology in radio has been limited. In news programs, its application is cautious, while non-news content like advertisements uses it more frequently. Radio Trijaya has not adopted this technology, prioritizing the traditional character of radio broadcasting. According to Informant 1 from Radio Trijaya, maintaining human interaction is crucial for the survival of radio. This human element is seen as a key aspect of originality that should be preserved. However, the station remains open to future changes, particularly in adapting to evolving audience preferences and economic considerations like efficiency.

“Why do we still use the announcer's voice as usual? Because the announcer's voice is close to the listener, and we want to make it clear that the radio is not a machine, not the same person's voice, but these are different people, and this is really a human being talking_ that's what we _want. In radio, that's what we're defending. I don't know if the company will suddenly say that we have too many broadcasters and try to reduce them, and we don't have a big budget; we can't replace them with technology” (a direct interview with informant on 3 January 2024).

Radio Elshinta emphasizes the importance of human presenters in delivering news and journalistic content. The station prioritizes trust in its operations, valuing the personal connection between broadcasters and their audience. The use of AI-generated voices is avoided, as it can create a disconnect, diminishing the warmth and nuance essential for engaging listeners. By relying on real human voices, Radio Elshinta maintains the character and intimacy that enhance the listener experience, reinforcing its reputation as a reliable news source. This commitment to human presentation reflects the station's dedication to quality journalism and audience connection.

Informant 2 stated that Radio Elshinta's announcers possess a distinctive tone and intonation that reflect the station's identity. Listeners can instantly recognize Radio Elshinta by their voices alone, without needing to see or remember the frequency. In contrast, a robotic voice tends to be monotonous and lacks emotional depth that engages audiences effectively.

“...But so far, if I do notice that the intonation (of the AI voice generator) is still like that.” It's still very distant from what we have to present to the audience. Actually, that's where radio excels. The spearhead is the announcer. There are actually announcers; there is such a person as a newsreader, but it feels like with reading, with intonation, it's still distant. So, there is a lack there” (a direct interview with informant 2 on 18 January 2024).

While advancements in robotic voice technology may improve its quality in the future, Radio Elshinta has chosen not to adopt it for news programming at this time. Instead, AI-generated voices are currently reserved for non-news content, such as advertisements, spots, and promotional materials.

The use of AI technology is becoming increasingly diverse among the radio stations in the Kompas Gramedia Radio Networks (KG Radio Networks). Some stations are leading in integrating AI for development purposes. For instance, Radio Motion employs prosa.ai to read news to its listeners. In a more advanced application, Radio Sonora has created an AI character named Miss Traffic using Synthesia to deliver traffic news and information. As a news, traffic information, and music-oriented station, the development of Miss Traffic in Radio Sonora FM is crucial for enhancing its branding. Miss Traffic regularly provides updates on traffic conditions, schedules, and locations for mobile driver's license services, serving as an audio-visual icon for Radio Sonora across various platforms.

Informant 3 confirmed that AI technology is instrumental in streamlining human tasks in radio broadcasting. AI technology can and will shift human tasks because it can work quickly for various tasks. For example, writers can become news writers or copywriters who can summarize, create summaries, and find insights from a piece of writing. However, Informant 3 is convinced that human function is even more crucial. Humans must serve as referees, judges, filters, or selectors regarding the news value of the news before it goes on air. Therefore, the news writers of Radio Sonora and Radio Smart FM are still human.

“AI cannot be as sophisticated as humans in filtering, especially about ethics and news. Articles or news that are not included in child-friendly guidelines. AI can't do that; it has to be human. That's why I still maintain the functions of a news writer with humans” (a direct interview with Informant 3 on 19 September 2023).

The use of AI technology in the broadcasting industry is influenced by timing. A clear example comes from Radio Trijaya, where the COVID-19 pandemic created an opportunity for the use of Zoom. This online communication platform facilitated meetings, presentations, and collaborations via video and audio, proving invaluable for radio program management and development. According to Informant 1, Zoom opened unforeseen possibilities. Learning from this experience, Radio Trijaya remains open to AI technology, actively monitoring advancements and exploring how they can enhance creativity and business management in radio broadcasting.

“For example, the use of Zoom. In the previous days, when we interviewed sources on the radio, there were only two people at most because we used the telephone. The phone link was one and two, so if we held a debate program, those two only if we wanted more than two sources had to come to the studio, or we had to make it outside with a mic...Now, with Zoom, we can interview up to eight sources at once, which was previously limited to Jakarta; now we can interview people all over the world. We can gather the ambassadors into one Zoom that is live on YouTube. We gathered 12 ambassadors in the month of Ramadan, and we never imagined that before” (a direct interview with informant 1 on 3 January 2024).

The adoption of AI technology in news radio varies in type and level of integration, with a focus on specific journalistic standards. The use of AI is approached with caution and deliberate consideration. In general, AI technology acts as a support tool, supplementary and complementary to the work of professionals at news radio stations throughout various stages of the editorial process. Human judgment and expertise remain central in editorial policy decisions. The sources emphasized the importance of human presence and function in the production of journalistic content. They believe that human involvement is crucial in selecting materials, assessing the credibility of sources, and determining which materials should be referenced in news reports. The use of AI technology in journalistic products remains limited compared to its application in non-journalistic products.

Discussion

In the evolving landscape of radio broadcasting, the integration of artificial intelligence (AI) has become an inevitable trend across various management aspects. AI technology offers numerous applications that cover every area of media industry management (Wei et al., 2022). As part of the media industry, radio broadcasting can also take the benefits to enhance efficiency in planning, producing, and delivering content. However, for news radio formats, the adoption of AI comes with significant considerations that must be addressed to maintain the core values of journalism.

The results of this research indicate that the adoption of AI technology in news radio varies in both type and degree of integration across different activities within radio production. The extent of adoption also differs, encompassing several of the nine areas of AI application in the media industry (Wei et al., 2022). The implementation of AI is approached with caution and thoughtful deliberation. Overall, AI technology serves as a supportive tool, supplementing and complementing the work of professionals at news radio stations throughout various stages of the editorial process.

Table II Findings on the Use and Function of AI Technology in the Three News Radio Stations

Radio	MNC Trijaya	Elshinta	KG Radio Network
Activity	News idea and coverage (combination AI and Human), online communication platform, program,	Identify relevant topics for news and talk shows (combination AI and Human)	Production and program management, generating program ideas, naming programs, identifying topics for news and talk shows, assisting with scriptwriting. Human: referees, judges, filters or selectors

Area	Intelligent Recommendation Intelligent Search	Intelligent Recommendation Intelligent Writing Intelligent Search	Intelligent Recommendation Smart Labels Intelligent Writing Intelligent Broadcaster Intelligent Advertising Intelligent Search
Type of AI	Google Trends, Chat GPT, Zoom	Google Trends, Chat GPT, voice generator for non-news contents	Voice generator, Video generator, Chat GPT
Function	Support	Supplementary	Complementary

Source: Compiled by researchers

News format Radio stations on the principle of trust. The foundation of their business relies on the audience's confidence in the news and information provided. This trust is essential for maintaining listener engagement and ensuring the credibility and reliability of the information disseminated. The use of AI technology without human oversight can lead to errors in reporting, thereby damaging the reputation and trust that has been built over time (Knight, 2024). Without this trust, the effectiveness of news delivery is significantly compromised. Consequently, radio news outlets must prioritize transparency, accuracy, and ethical reporting to foster and sustain audience trust. This relationship between the broadcaster and the audience is critical to the success of their business model.

Trust is a critical currency in journalism, particularly in radio news, where instant updates and live reporting hold significant sway. Audiences expect accurate, reliable information presented in a clear and compelling manner. When this expectation is met, listeners are more likely to engage consistently with the content, contributing to higher ratings and greater audience retention. However, should the integrity of the information be compromised—whether through errors introduced by AI technologies or inadequate oversight—the repercussions can be far-reaching, potentially dismantling the credibility of the entire outlet.

The use of AI in news media requires guidelines to prevent the erosion of journalistic principles that must be upheld. This need has prompted the Indonesian press council to develop guidelines for the use of AI technology in the mass media. As of December 2024, the development process has entered its finalization stage, and once officially released, these guidelines will be available for use by mass media, including news radio. The chairperson of the press council, Ninik Rahayu, stated that the guidelines for AI usage encompass rules for each stage of AI utilization, including when AI is used as an information source. She emphasized that journalistic media must still verify, cross-check, and validate the accuracy of data from any journalistic content produced by AI (Kompas, 2024). This underscores that despite technological advancements, human oversight remains crucial in determining editorial policies. By prioritizing accuracy and reliability, the press council aims to ensure that journalism maintains its credibility. Thus, as media continues to evolve with technological influences, the role of human judgment and responsibility is more essential than ever in upholding journalistic standards.

The article discusses the human relationships formed between radio broadcasters and their listeners. This relationship is developed through interactions that emphasize specific characteristics exhibited by the radio personalities. These features play a crucial role in building a connection with the audience, making the broadcast more engaging and relatable. Broadcasters often share personal stories, opinions, and experiences, which help to create a sense of familiarity and trust. As listeners tune in regularly, they often feel a bond with the broadcaster, leading to a community-like atmosphere. This dynamic interaction is essential for radio's appeal and effectiveness in communication.

The voice and presentation of the broadcaster are such that they create a sense of connection with the audience, so that when the broadcaster speaks, the listener feels as though the message is personally directed at them (Asy'ari & Marantika, 2020; Krause, 2020; Masduki, 2022; Thompson, 2020). It is

the human voice that fosters a strong, human connection with listeners by expressing natural features such as emotion, personality, and authenticity. AI cannot easily replicate these features, whether in on-air interactions or in person at events (Knight, 2024). While communication between listeners and AI broadcasters may resemble human-to-human communication, the human brain is capable of distinguishing between genuine warmth and emotion and those generated artificially (Knight, 2024). The awareness of interacting with an AI broadcaster or reporter creates a barrier that disrupts the sense of human connection.

The notion that artificial intelligence (AI) will not replace the human connections forged between radio talents and their audiences is increasingly challenged by the shifting generational dynamics within media consumption. As the audience transitions from digital migrants to digital natives and even AI natives, the landscape of radio broadcasting is bound to experience significant changes.

For Baby Boomers and Generation X, the relationship with radio stations and their favorite hosts have been characterized by deep emotional bonds. Many in these cohorts formed fanatical connections with their radio idols, often perceiving them as integral parts of their daily lives. The mediums of communication available during their formative years fostered unique relationships, where personalities on the airwaves resonated deeply with listeners.

The emergence of AI in the radio industry poses both challenges and opportunities. While AI can generate content, curate playlists, and even simulate voices, the emotional connection that humans experience through authentic voices remains irreplaceable. Human brains have a heightened ability to distinguish between authentic human voices and AI-generated imitations (Knight, 2024) a critical factor in maintaining listener trust and connection.

In an evolving digital landscape, the significance of understanding the differences in media behaviors among generations cannot be overstated. The current cohort of young individuals, encompassing Generations Z and Alpha, is ushering in a new era characterized by distinct preferences and engagement with technology. Unlike previous generations, these digital natives have been immersed in an online environment from an early age, resulting in a unique relationship with the Internet and emerging technologies such as artificial intelligence (AI).

Kotler, Kertajaya, and Setiawan (2022) highlight that both Generation Z and Generation Alpha have grown up with the Internet, allowing them to navigate digital platforms with unmatched ease. Their flexibility and quick adaptation to technological advancements fundamentally differentiate them from older generations, including Millennials, who are still learning to adjust to the rapid evolution of technology.

One critical aspect of this generational shift is the varying levels of digital savviness among different age groups. As noted by Kotler, Kertajaya, and Setiawan (2022), these differences are intrinsically linked to how each generation perceives and values the Internet and digital technology. For instance, while Millennials have witnessed the transition from analog to digital, Gen Z and Alpha have only known a digital world, which shapes their expectations, behaviors, and interactions in unprecedented ways.

Millennials, often referred to as Generation Y, regard the internet primarily as a tool—a means to achieve specific tasks or goals. This generation experienced the rise of digital technology during their formative years, but they possess a nuanced understanding of its potential and limitations. For millennials, the internet serves as a facilitator; it enables social connections, supports professional endeavors, and provides access to information. However, it remains a separate entity from their everyday lives, treated as an accessory rather than an integral aspect of existence.

Contrasting sharply with millennials are Generations Z and Alpha, who have been enveloped in a digital environment from the moment of their birth. These younger generations do not merely use technology; they inhabit it. For them, the internet and digital devices are fundamental components of their identity and daily routines. The omnipresent nature of technology has cultivated an unparalleled level of immersion in the digital landscape. As Kotler, Kertajaya, and Setiawan (2022) articulate, this immersion fosters unique patterns of interaction, learning, and socialization.

In recent years, artificial intelligence (AI) has emerged as a double-edged sword in contemporary discussions regarding technology and its impact on society. While certain demographics perceive AI as a threat or disruption to traditional norms and employment structures, this sentiment is notably absent among Generations Z and Alpha. These generations, characterized by their digital savviness and adaptability, have embraced technology as an integral component of daily life, particularly in their interactions with AI systems (Kotler et al., 2022).

The familiarity they possess with various applications, especially voice-activated systems like Apple's Siri and Amazon's Alexa, speaks volumes about their comfort level with AI technologies (Kotler et al., 2022). Another influential factor that reinforces this comfort level with AI is the gaming culture prevalent among these generations. Listeners from the younger generation may not be familiar with traditional radio programs, yet they are accustomed to voices generated by AI technology. This technology-generated voice may serve as a benchmark by which they assess content across other media platforms (Wei et al., 2022). These interactions with voice technology, coupled with their exposure to AI in gaming, contribute significantly to a broader acceptance of AI as a tool for empowerment rather than a looming threat.

The adoption of AI technology in radio broadcasting is crucial to convey that the medium is not stagnant but instead adaptive to technological advancements. Building this perception is important to maintain the relevance of radio, especially in the context of news and information dissemination within society. By integrating AI, radio can enhance its capabilities and better meet the evolving needs of its audience. This approach not only modernizes the broadcasting process but also strengthens the position of radio as a vital source of information in a rapidly changing media landscape. It highlights radio's commitment to innovation and responsiveness to audience demands.

Conclusion

The research concluded that initially, the use of AI technology in news radio was not considered urgent, given the simple and straightforward production management of this medium. Nevertheless, the development of AI technology continues to be closely monitored. While AI can enhance management efficiency, concerns about over-reliance on technology affecting human relationships remain. Radio managers must balance technological advances with the human touch and uphold journalistic standards such as accuracy and transparency to maintain listener trust.

Each station has a different response in terms of policy and the next steps to adopt AI technology. Some are using the AI tools available for specific activities while closely monitoring the development of AI technology. Others are more advanced, actively incorporating AI into their operations and even customizing content or programming. To date, there is still a lack of formal internal guidelines for using AI technology in journalism, making the Indonesian press council's guidelines on using AI for mass media particularly important.

News broadcasters are using AI technology to varying degrees while maintaining journalism standards. In editorial, AI technology acts as a supporting and complementary tool in the process of producing journalistic content. The human role remains central to news policy and validation. The human relationship between broadcasters and listeners is still considered important for radio media. Nevertheless, the changing media consumption patterns of the digital native generation need to be monitored.

In addition to the findings and conclusions of this study, the researchers acknowledge the shortcomings and limitations, which provide input for future research. The informants in this research are limited to decision-makers, so expanding the scope to include all levels of media practitioners would provide a more comprehensive understanding of AI utilization. The scope of the research is also highly limited to three news radio stations in Jakarta. Considering the vast and diverse nature of Indonesia, further research on AI utilization in a larger number of news radio stations is necessary. This includes continuous monitoring over time due to the rapid changes of AI technology. Additionally, this research

has some weaknesses related to the methods employed, particularly the reliance on interviews as the primary data collection technique. A greater variety of data collection methods is necessary to mitigate issues such as subjectivity, memory bias, and recall bias, among others.

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